

PERSONAL
INFORMATION

Last Name: Zekios
First Name: Constantinos (Constantine)

CONTACT
INFORMATION

Florida International University
Department of ECE, EC 3900
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RESEARCH
INTERESTS

Field Theory, Microwave Theory, Antenna Theory, Perturbation Theory
Computational Electromagnetics, Antenna Design, Antenna Arrays
Design, Microwave Components Design, Beamforming Networks Design,
Electromagnetic Surfaces, THz and Photonics

WORK
EXPERIENCE

- August 2022 to Present **Assistant Professor** at Florida International University, FL,
USA, Electrical and Computer Engineering Department
- August 2020 to August 2022 **Research Assistant Professor** at Florida International University, FL,
USA, Electrical and Computer Engineering Department
- May 2018 to August 2020 **Postdoctoral Associate** at Florida International University, FL,
USA, Electrical and Computer Engineering Department
- January 2016 to May 2018 **Postdoctoral Associate** at University of Massachusetts Amherst, MA,
USA, Electrical and Computer Engineering Department
- November 2008 to June 2015 **Research Associate** at Democritus University of Thrace, Greece
Electrical and Computer Engineering Department
- 2004 to 2015 **Tutor** for High School and Undergraduate students.

EDUCATION

Democritus University of Thrace, Xanthi, Greece
Doctor of Philosophy, Electrical and Computer Engineering
Communication and Satellite Telecommunication Systems specialization
(emphasis on microwaves) Graduate of Democritus University of Thrace,
June 2015 (Grade: Excellent)
Subject: “**Electromagnetic Simulation and Eigenanalysis of Three
Dimensional Radiating Structures Based on the Finite Element
Method**”.

Democritus University of Thrace, Xanthi, Greece
Master of Science, Electrical and Computer Engineering
Communication and Satellite Telecommunication Systems specialization
(emphasis on microwaves). Graduate of Democritus University of

Thrace, February 2011 (Grade: Excellent)

Subject: “**Study and Design of Reverberation Chambers with aid of Eigenanalysis**”.

Democritus University of Thrace, Xanthi, Greece

5 years Diploma, Electrical and Computer Engineering

Communication specialization (emphasis on microwaves) Graduate of

Democritus University of Thrace, November 2008 (GPA: 8.67/10)

Subject: “**Electromagnetic Simulation of Closed or Open Three Dimensional Structures Employing Finite Elements**”.

August 2022 to present

Assistant Professor at Florida International University, FL, USA

Electrical and Computer Engineering Department

- Developed antennas (e.g., leaky wave antennas, etc.), arrays (e.g., reflectarrays, transmitarrays, phased arrays, etc.), multiple input multiple output communication models, beamforming networks, frequency selective surfaces, metasurfaces.
- Developed numerical methods, metaheuristic algorithms, and machine learning models for the study, analysis and design of microwave, THz, and photonic devices (e.g., resonators, antennas, etc.).
- Co-advised 9 Ph.D. and 1 Postdoc.

August 2022 to August 2022

Research Assistant Professor at Florida International University, FL, USA

Electrical and Computer Engineering Department

- Developed foldable, deployable, reconfigurable and multifunctional antennas, frequency selective surfaces, arrays, reflectarrays, transmitarrays.
- Developed computational tools for the analysis and design of foldable, deployable, reconfigurable and multifunctional antennas.
- Collaborated with Prof. Georgakopoulos for the development and preparation of 2 proposals, 1 funded from NSF (\$365,000) and 1 funded from AFOSR (\$1 million).
- Co-advised 8 Ph.D. and 1 undergraduate student.

May 2018 to August 2020

Postdoctoral Associate at Florida International University, FL, USA

Electrical and Computer Engineering Department

- Developed foldable, deployable, reconfigurable and multifunctional antennas, frequency selective surfaces, arrays, reflectarrays, transmitarrays.
- Developed computational tools for the analysis and design of foldable, deployable, reconfigurable and multifunctional antennas.
- Collaborated with Prof. Georgakopoulos for the development and preparation of 2 proposals, 1 funded from NSF (\$100,000) and 1 funded from AFOSR (\$4.8 million).
- Co-advised 6 Ph.D. and 6 undergraduate students.

January 2016 to May 2018

Postdoctoral Associate at University of Massachusetts Amherst, MA,

USA

Electrical and Computer Engineering Department

- Developed a Fast Integral Equation (IE) method/Method of Moments (MoM).
- Developed robust IE solvers for the solution of electrically large structures.
- Co-advised 4 Ph.D. and 2 Master students.

November 2008 to June 2015 **Research Associate** at Democritus University of Thrace, Greece
Electrical and Computer Engineering Department

- Developed a Finite Element Method (FEM) code for the solution of electromagnetic problems.
- Developed hybrid semi-analytical techniques using eigenfunction expansions and finite elements.
- Developed a characteristic mode analysis tool for the study and design of radiating structures.
- Analyzed and studied electromagnetic compatibility and electromagnetic immunity problems.
- Developed a FEM code for the analysis and study of photonic and THz structures.
- Developed robust solvers for the solution of electrically large structures.
- Collaborated with Prof. Kyriacou for the development and preparation of 1 funded proposal.
- Mentored several Ph.D., Master and undergraduate students.

FUNDING

Award Number (FAIN): 2430828, NSF ECCS, Total Award Amount: \$400,000, PI: John L Volakis, co-PI: Markondeya Raj Pulugurtha, co-PI: Konstantinos Zekios, Award Period of Performance: Start Date: 11/01/2024 End Date: 10/31/2026, Project Title: ENG-ADVWIRE:CCSS: RF Interference Mitigation in High-Density Heterogeneous Semiconductor Device Packaging Through Digital Twin Emulations

Application No. 83263-RT-REP, Total Award Amount: \$798,818.32, PI: Stavros Georgakopoulos, co-PI: John Volakis, Konstantinos Zekios, Dimitrios Pavlidis, Award Period of Performance: Project Title: Characterization Testbed for Research on mmWave Communication and Remote Sensing Systems

AWARDS/ SCHOLARSHIPS

2025

- (1) Have been selected as a top reviewer among the 2024 best-performing reviewers of IEEE Transactions on Antennas and Propagation.
- (2) PhD student Christos Exadaktylos received for our research on “Realizing UWB In-Package Antenna Arrays for Future High mmWave Communications” the competitive IEEE Antennas and Propagation Society Fellowship that came with a \$5,000 award.

(3) PhD student Malak Elaouinate received the best student paper award at the 2025 IEEE International Workshop on Antenna Technology (iWAT) for our paper “A Dual-State Active Wideband Reflectarray”.

2024 (1) PhD student Ricardo Sendrea received for our research on “Computational Methods with Physics-Based Machine Learning for Forward and Inverse Electromagnetic Problems” the competitive IEEE Antennas and Propagation Society Fellowship that came with a \$5,000 award.

(2) PhD student's (Ch. Exadaktylos) conference paper was selected as a top 10 finalist at the 2024 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI) Student Paper Competition.

(3) PhD student's (D. Lialios) conference paper was selected as a TOP 10 FINALIST at the 2024 IEEE PAST Student Paper Competition at the 2024 IEEE PAST Student Paper Competition.

(4) PhD student's (R. Sendrea) conference paper was selected as a top 10 finalist at the 2024 International Applied Computational Electromagnetics Society Symposium Student Paper Competition.

Recognition for exceptional performance as a Reviewer of the IEEE Transactions on Antennas and Propagation (May 1, 2023, to April 30, 2024). 200 best reviewers out of 2000 without further ranking.

2023 (1) Recognition for exceptional performance as a Reviewer of the IEEE Transactions on Antennas and Propagation (May 1, 2022, to April 30, 2023). 200 best reviewers out of 2000 without further ranking.

(2) PhD student's (M. Hamza) conference paper was selected as a top 10 finalist at the 2023 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI) Student Paper Competition.

2022 (1) PhD student's (D. Lialios) conference paper was selected as an HONORABLE MENTION amongst 202 papers submitted to the 2022 IEEE AP-S Student Paper Competition at the 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI).

(2) PhD student's (M. Hamza) conference paper was selected as an HONORABLE MENTION amongst 202 papers submitted to the 2022 IEEE AP-S Student Paper Competition at the 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI).

(3) PhD student's (A. Biswas) conference paper was selected as an HONORABLE MENTION amongst 202 papers submitted to the 2022

IEEE AP-S Student Paper Competition at the 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI).

(4) PhD student's (D. Lialios) conference paper was selected as a TOP 10 FINALIST at the 2022 IEEE PAST Student Paper Competition at the 2022 IEEE PAST Student Paper Competition.

2021

(1) PhD student Antonio Rubio received the "Young Professionals Best Paper Award – 3rd Place" for his conference paper at the 2020/2021 IEEE Wireless and Microwave Technology Conference (WAMICON), Clearwater Beach, FL, USA, Apr. 28-29, 2021.

(2) PhD student Antonio Rubio received the "Student Best Paper Award – 2nd Place" for his conference paper at the 2020/2021 IEEE Wireless and Microwave Technology Conference (WAMICON), Clearwater Beach, FL, USA, Apr. 28-29, 2021.

(3) PhD student Akash Biswas received the "Student Best Paper Award – 3rd Place" for his conference paper at the 2020/2021 IEEE Wireless and Microwave Technology Conference (WAMICON), Clearwater Beach, FL, USA, Apr. 28-29, 2021.

(4) PhD student's (M. Hamza) conference paper was selected as an HONORABLE MENTION amongst 245 papers submitted to the 2021 IEEE AP-S Student Paper Competition at the 2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI).

(5) PhD student Nicholas Russo was awarded the IEEE Antennas and Propagation Society Doctoral Research Grant (\$4,000) by the IEEE Antennas and Propagation Society in 2021.

2020

(1) Recognition for exceptional performance as a Reviewer of the IEEE Transactions on Antennas and Propagation (May 1, 2019, to April 30, 2020). 50 best reviewers out of 2000 without further ranking.

(2) Undergraduate student researcher Briana Gonzalez received the first-place award in the undergraduate poster presentation category at the 2020 Emerging Researchers National (ERN) Conference in STEM in Washington, DC.

(3) Graduate student researcher Gianfranco Perez-Greco received the second-place award in the oral graduate oral presentation category at the 2020 Emerging Researchers National (ERN) Conference in STEM in Washington, DC.

2019

Recognition for exceptional performance as a Reviewer of the IEEE Transactions on Antennas and Propagation (May 1, 2018, to April 30,

2019). 50 best reviewers out of 2000 without further ranking.

- 2008 In the graduate ceremony of November 2008, Award for 1st ranking of the graduates (GPA: 8.67/10)
- 2008 Undergraduate/Pre-Graduate Scholarship Award from Microwave Theory and Techniques Society in recognition of academic achievement and excellence, and outstanding potential for a career in the field of microwaves and RF
- 2005-2006 Greek State Scholarships Foundation: Scholarship and Award for 1st ranking in class during 5th and 6th semesters of studies (GPA: 9/10)
- 2004-2005 Greek State Scholarships Foundation: Scholarship and Award for 2nd ranking in class during 3rd and 4th semesters of studies (GPA: 7.96/10)
- 2000 After a contest in writing was chosen, among the Greek students of high school, for the participation in 5 day-conversation with students from other European countries in the European Parliament in Strasbourg.
- 1998-2003 Ministry of National Education and Religious Affairs: Award for progress in all Gymnasium and General High School classes.

SERVICE

Peer reviewer for the following journals:

- a. IEEE Transactions on Antennas and Propagation
- b. IET Microwaves, Antennas & Propagation
- c. IEEE Open Journal of Antennas and Propagation
- d. Nature Scientific Reports

Chair of technical sessions, e.g.,:

- a. 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (Chair in: Reconfigurable Arrays, Tunable and Reconfigurable Frequency Selective Surfaces, Wireless Power Transfer)
- b. 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (Chair in: Optimization, Nanoscale and Nonlinear Electromagnetics)
- c. 2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting
- d. 2023 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting

- e. 2024 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting
- f. 2025 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting

Serve as an Associate Editor for IEEE Transactions on Antennas and Propagation

Serve as an Associate Editor for Nature Scientific Reports (impact factor: 4.6).
Serve as a guest editor for a special issue named as:

- a. "Recent Advances in Antenna Arrays and Millimeter-Wave Components" in MDPI Electronics.
https://www.mdpi.com/journal/electronics/special_issues/Antenna_Millimeter_Wave_Components,
- b. "Microwave photonics" in Scientific Reports Nature.
<https://www.nature.com/collections/bjaebheec>.

Technical chair in 2024 International Applied Computational Electromagnetics Society (ACES) Symposium.
Technical chair in 2026 International Applied Computational Electromagnetics Society (ACES) Symposium.

Program Committee in 2024 and 2025 International Conference on Computing and Machine Intelligence (ICMI).

SCIENTIFIC ORGANISATIONS

- 2022 – today: Senior IEEE Member
- 2004 – today: IEEE Member
- 2008 – today: Member of Microwave Theory and Techniques (MTT) society.
- 2016 – today: Member of Antennas and Propagation (AP) society.

PATENTS

- P1. Muhammad Hamza, Stavros Georgakopoulos, **Constantinos Zekios**, Christos Exadaktylos, "Dual-Polarized Ultrawideband Antennas and Antenna Arrays," *USPTO Utility Patent US 12,142,850 (date of patent 11/12/2024)*.
- P2. Muhammad Hamza, Stavros Georgakopoulos, **Constantinos Zekios**, "Planar Tightly Coupled Arrays and Antenna Elements Thereof," *USPTO Utility Patent US 12,142,836 (date of patent 11/12/2024)*.
- P3. Dimitrios Lialios, **Constantinos Zekios**, Stavros Georgakopoulos, "Ultrawideband beamforming networks," *USPTO Utility Patent US 12,040,558 (date of patent 07/16/2024)*.
- P4. Anastasios Koutinos, **Constantinos Zekios**, Stavros Georgakopoulos, "Antennas with Increased Bandwidth," *USPTO Utility Patent US 11,881,621 (date of patent 01/23/2024)*.
- P5. **Constantinos L. Zekios**, Stavros V. Georgakopoulos, Muhammad Hamza, "Arrays with Foldable and Deployable Characteristics," *USPTO Utility Patent US 11,303,092 (date of patent 04/12/2022)*.

- P6. **Constantinos L. Zekios**, Stavros V. Georgakopoulos, Muhammad Hamza, "Arrays with Foldable and Deployable Characteristics," *USPTO Utility Patent US 11,056,791* (date of patent 07/06/2021).
- P7. Abdul-Sattar Kaddour, **Constantinos L. Zekios**, Stavros V. Georgakopoulos, "Reconfigurable Arrays with Multiple Unit Cells," *USPTO Utility Patent US 10,931,022* (date of patent 02/23/2021). <https://patents.google.com/patent/US10931022B1/en>
- P8. **Zekios, C. L.**, Georgakopoulos, S. V., Nicholas E. Russo, "Multiple Input Multiple Output Antenna Devices", *USPTO Utility Patent US 10,910,691* (date of patent 2/2/2021). <https://patents.google.com/patent/US10910691B1/en>
- P9. **Zekios, C. L.**, Georgakopoulos, S. V., Reconfigurable and Foldable Multimode MIMO Antenna, *USPTO Utility Patent US 10,658,741* (date of patent 5/19/2020). <https://patents.google.com/patent/US10658741B1/en>
- P10. **Constantinos L. Zekios**, Stavros V. Georgakopoulos, Nicholas E. Russo "Foldable, Deployable and Reconfigurable MIMO antenna arrays," *USPTO Utility Patent US 10,756,412* (date of patent 8/25/2020).
- P11. **Constantinos L. Zekios**, Stavros V. Georgakopoulos, Akash Biswas "Reconfigurable Origami Passive Arrays," *USPTO Utility Patent US 10,833,392* (date of patent 11/10/2020).
- P12. Abdul-Sattar Kaddour, Stavros V. Georgakopoulos, **Constantinos L. Zekios**, "Reconfigurable Arrays with Foldable Panels," *USPTO Utility Patent US 10,854,971* (date of patent 12/01/2020).

PUBLICATIONS

Journals

- J1. D. G. Arnaoutoglou, M. O. Anastasiadis, **C. L. Zekios** and G. A. Kyriacou, "Eigen-Analysis of Multiferroics using Finite Difference Frequency Domain for Shielded Structures," in *IEEE Transactions on Antennas and Propagation*, doi: 10.1109/TAP.2025.3624094.
- J2. M. O. Anastasiadis, **C. L. Zekios**, S. B. Venkatakrisnan and J. L. Volakis, "A Comprehensive Review On Tightly Coupled Dipole Arrays," in *IEEE Transactions on Antennas and Propagation*, doi: 10.1109/TAP.2025.3588742.
- J3. Arnaoutoglou, Dimitrios G., Tzichat M. Empliouk, Theodoros N. F. Kaifas, **Constantinos L. Zekios**, and George A. Kyriacou. 2025. "Perspectives and Research Challenges in Wireless Communications Hardware for the Future Internet and Its Applications Services" *Future Internet* 17, no. 6: 249. <https://doi.org/10.3390/fi17060249>
- J4. Zhao, Y.; Venkatakrisnan, S.B.; **Zekios, C.L.**; Mandal, S.; Madanayake, A. Multi-Beam STAR MIMO Using Differential Arrays. *Information* 2025, 16, 321. <https://doi.org/10.3390/info16040321>
- J5. C. Exadaktylos, A. G. Koutinos, **C. L. Zekios** and S. V. Georgakopoulos, "A Design Method to Increase the Bandwidth of Reflectarray Antennas," in *IEEE Open Journal of Antennas and Propagation*, vol. 6, no. 2, pp. 497-512, April 2025, doi: 10.1109/OJAP.2025.3530251.
- J6. Sendrea, R.E.; **Zekios, C.L.**; Georgakopoulos, S.V. "A Review of Multi-Fidelity Learning Approaches for Electromagnetic Problems" *Electronics* 2025, 14, 89. <https://doi.org/10.3390/electronics14010089>

- J7. M. Hamza, C. Exadaktylos, **C. L. Zekios** and S. V. Georgakopoulos, "An Ultrawideband Fully Planar Inverted-L Element (FILE) Array," in *IEEE Transactions on Antennas and Propagation*, vol. 73, no. 1, pp. 174-187, Jan. 2025, doi: 10.1109/TAP.2024.3502900.
- J8. A. G. Koutinos, **C. L. Zekios** and S. V. Georgakopoulos, "Reexamining the Impedance Matching Equation of Alfred Lopez: A new light and new understanding," in *IEEE Antennas and Propagation Magazine*, doi: 10.1109/MAP.2024.3457308.
- J9. MD Khan, **C. L. Zekios**, Sh. Bhardwaj, and S. V. Georgakopoulos, "A Physics-Informed Neural Network-Based Waveguide Eigenanalysis". in *IEEE Access*, vol. 12, pp. 120777-120787, 2024, doi: 10.1109/ACCESS.2024.3452160.
- J10. S. Yao, **C. L. Zekios**, and S. V. Georgakopoulos, "A Rigidly Foldable and Reconfigurable Thick Origami Antenna". *Phil. Trans. R. Soc. A* ;382: 20240002. <https://doi.org/10.1098/rsta.2024.0002>.
- J11. D. I. Lialios, **C. L. Zekios** and S. V. Georgakopoulos, "Non-Orthogonal Multibeam Network Synthesis Achieving Stein's Limit and Implementation Based on RGW Technology," in *IEEE Transactions on Antennas and Propagation*, vol. 72, no. 11, pp. 8184-8198, Nov. 2024, doi: 10.1109/TAP.2024.3441758.
- J12. A. G. Koutinos, **C. L. Zekios**, S. V. Georgakopoulos and G. A. Kyriacou, "Corrections to "Increasing the Bandwidth of Antennas Based on the Frequency Pulling Technique: Theoretical Limitations and Practical Considerations", in *IEEE Transactions on Antennas and Propagation*, vol. 72, no. 9, pp. 7432-7432, Sept. 2024, doi: 10.1109/TAP.2024.3428409.
- J13. Empliouk T, Kapetanidis P, Arnaoutoglou D, Kolitsidas C, Lialios D, Koutinos A, Kaifas TNF, Georgakopoulos SV, **Zekios CL**, Kyriacou GA. Compact, Ultra-Wideband Butler Matrix Beamformers for the Advanced 5G Band FR3—Part I. *Electronics*. 2024; 13(14):2763. <https://doi.org/10.3390/electronics13142763>.
- J14. Mishra, A.K., Russo, N.E., An, H.S., **Zekios, C.L.**, Georgakopoulos, S.V. and Shepherd, R.F. (2024), *Robotic Antennas Using Liquid Metal Origami*. *Adv. Intell. Syst.* 2400190. <https://doi.org/10.1002/aisy.202400190>.
- J15. A. G. Koutinos, **C. L. Zekios**, S. V. Georgakopoulos and G. A. Kyriacou, "Increasing the Bandwidth of Antennas Based on the Frequency Pulling Technique: Theoretical Limitations and Practical Considerations," in *IEEE Transactions on Antennas and Propagation*, vol. 72, no. 5, pp. 4064-4076, May 2024, doi: 10.1109/TAP.2024.3384771.
- J16. M. R. Khan, **C. L. Zekios**, S. Bhardwaj and S. V. Georgakopoulos, "A Deep Learning Convolutional Neural Network for Antenna Near-Field Prediction and Surrogate Modeling," in *IEEE Access*, doi: 10.1109/ACCESS.2024.3377219
- J17. D. I. Lialios, **C. L. Zekios** and S. V. Georgakopoulos, "A New Class of Full-Dimensional Planar True-Time-Delay Beamforming Networks," in *IEEE Transactions on Antennas and Propagation*, vol. 72, no. 3, pp. 2337-2346, March 2024, doi: 10.1109/TAP.2024.3352832.
- J18. A. G. Koutinos, **C. L. Zekios** and S. V. Georgakopoulos, "Increasing the Bandwidth of Wideband Antennas Using the Frequency Pulling Technique," in *IEEE Open Journal of Antennas and Propagation*, vol. 4, pp. 1095-1102, 2023, doi: 10.1109/OJAP.2023.3329762.
- J19. Biswas, A., **Zekios, C.L.** & Georgakopoulos, S.V. An ultra-fast method for designing holographic phase shifting surfaces. *Sci Rep* 13, 16511 (2023). <https://doi.org/10.1038/s41598-023-43815-2>.
- J20. Russo, N.E.; **Zekios, C.L.**; Georgakopoulos, S.V. A CMA-Based Electronically Reconfigurable Dual-Mode and Dual-Band Antenna. *Electronics* 2023, 12, 3915. <https://doi.org/10.3390/electronics12183915>.

- J21. R. E. Sendrea, **C. L. Zekios** and S. V. Georgakopoulos, "Multi-Fidelity Surrogate Modeling Based On Analytical Eigenfunction Expansions," in *IEEE Transactions on Antennas and Propagation*, vol. 71, no. 2, pp. 1673-1683, Feb. 2023, doi: 10.1109/TAP.2022.3228615.
- J22. G. P. Carrara, **C. L. Zekios** and S. V. Georgakopoulos, "A TM₁₁ High-Order Mode Leaky Wave Antenna," in *IEEE Transactions on Antennas and Propagation*, vol. 71, no. 1, pp. 119-130, Jan. 2023, doi: 10.1109/TAP.2022.3217257.
- J23. D. I. Lialios, **C. L. Zekios**, S. V. Georgakopoulos and G. A. Kyriacou, "A Novel RF to Millimeter Waves Frequency Translation Scheme for Ultra-Wideband Beamformers Supporting the Sub-6 GHz Band," in *IEEE Transactions on Antennas and Propagation*, vol. 70, no. 12, pp. 11718-11733, Dec. 2022, doi: 10.1109/TAP.2022.3210698.
- J24. Muhammad Hamza, **Constantinos L. Zekios**, and Stavros V. Georgakopoulos, "A Low Profile Planar Dual-Polarized Tightly Coupled Dipole Reflectarray With 5:1 Bandwidth," in *IEEE Open Journal of Antennas and Propagation*, vol. 3, pp. 958-969, 2022, doi: 10.1109/OJAP.2022.3198468.
- J25. Biswas, A., **Zekios, C.L.**, Ynchausti, C. et al., An ultra-wideband origami microwave absorber. *Sci Rep* 12, 13449 (2022). <https://doi.org/10.1038/s41598-022-17648-4>
- J26. M. R. Khan, **C. L. Zekios**, S. Bhardwaj and S. V. Georgakopoulos, "Multiobjective Fitness Functions With Nonlinear Switching for Antenna Optimizations," in *IEEE Open Journal of Antennas and Propagation*, vol. 3, pp. 613-626, 2022, doi: 10.1109/OJAP.2022.3178840.
- J27. N. E. Russo, **C. L. Zekios**, and S. V. Georgakopoulos, "MIMO Systems in SmallSat Swarms: System Characterization with the Introduction of a Channel Model," in *IEEE Transactions on Antennas and Propagation*, vol. 70, no. 9, pp. 8276-8290, Sept. 2022, doi: 10.1109/TAP.2022.3161310.
- J28. Paschaloudis, Konstantinos D., **Constantinos L. Zekios**, Stavros V. Georgakopoulos, and George A. Kyriacou, "A Finite Element Based Characteristic Mode Analysis", in *IEEE Open Journal of Antennas and Propagation*, vol. 3, pp. 287-303, 2022, doi: 10.1109/OJAP.2022.3150594.
- J29. Paschaloudis, Konstantinos D., **Constantinos L. Zekios**, Georgios C. Trichopoulos, Filippos Farmakis, and George A. Kyriacou, 2021. "An Eigenmode Study of Nanoantennas from Terahertz to Optical Frequencies," *Electronics* 10, no. 22: 2782. <https://doi.org/10.3390/electronics10222782>.
- J30. S. V. Georgakopoulos, **C. L., Zekios**, et al., "Origami Antennas," in *IEEE Open Journal of Antennas and Propagation*, vol. 2, pp. 1020-1043, 2021, doi: 10.1109/OJAP.2021.3121102.
- J31. M. R. Khan, **C. L. Zekios**, S. Georgakopoulos and S. Bhardwaj, "Automated Design and Optimization of Origami Electromagnetic Structures [EM Programmer's Notebook]," in *IEEE Antennas and Propagation Magazine*, vol. 63, no. 2, pp. 89-102, April 2021, doi: 10.1109/MAP.2021.3053962.
- J32. N. E. Russo, **C. L. Zekios**, and S. V. Georgakopoulos, "Decoupling Modes in Multi-Band Microstrip Patch Antennas," in *IEEE Open Journal of Antennas and Propagation*, vol. 2, pp. 118-125, 2021, doi: 10.1109/OJAP.2020.3046458.
- J33. Lialios, D.I.; Ntetsikas, N.; Paschaloudis, K.D.; **Zekios, C.L.**; Georgakopoulos, S.V.; Kyriacou, G.A. Design of True Time Delay Millimeter Wave Beamformers for 5G Multibeam Phased Arrays. *Electronics* 2020, 9, 1331. doi: 10.3390/electronics9081331

- J34. Biswas, A., **Zekios, C.L.** & Georgakopoulos, S.V. Transforming single-band static FSS to dual-band dynamic FSS using origami. *Sci Rep* 10, 13884 (2020). <https://doi.org/10.1038/s41598-020-70434-y>.
- J35. Muhammad Hamza, **Constantinos L. Zekios**, and Stavros V. Georgakopoulos, "A Thick Origami Reconfigurable and Packable Patch Array with Enhanced Beam Steering," in *IEEE Antennas and Propagation*, vol. 68, no. 5, pp. 3653-3663, May 2020, doi: 10.1109/TAP.2020.2963922.
- J36. Kun Bao, **Constantinos L. Zekios**, and Stavros V. Georgakopoulos, "Miniaturization of SCMR Systems Using Multilayer Resonators," in *IEEE Access*, vol. 7, pp. 143445-143453, 2019, doi: 10.1109/ACCESS.2019.2945319.
- J37. Konstantinos D. Paschaloudis, **Constantinos L. Zekios**, Laura Ghisa, Peter C. Allilomes, Kyriakos E. Zoiros, Ammar Sharaiha, Stavros Iezekiel, and George A. Kyriacou "An Eigenanalysis Study of Tunable THz and Photonic Unbounded Structures Employing Finite Element Method," in *IEEE Photonics Journal*, vol. 11, no. 5, pp. 1-20, Oct. 2019, Art no. 5502920, doi: 10.1109/JPHOT.2019.2935805.
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